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# PATHOLOGICAL ANATOMY OF CHOLERA.

[Communicated for the Boston Medical and Surgical Journal.

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IN order to understand the theory or treatment of any disease, a knowledge of its pathological anatomy is absolutely essential. This fact is more often overlooked with regard to cholera, perhaps, than to any other disease, and for the very natural reason that no investigations in this direction have as yet thrown much light upon the subject. Still, to properly appreciate the numerous theories constantly brought forward, the results, both positive and negative, of the *post-mortem* examinations should be present to the mind. To bring together facts scattered through many different treatises has been the object of the present *résumé*.

There are some few cases on record where patients have succumbed to the prodromic symptoms before the cholera proper had declared itself, but as there have been preserved none of the pathological changes I shall pass at once to those recorded after death during the second period, or that of collapse.

In these cases there is frequently a sudden elevation of temperature; invariably the body loses its heat but slowly. The muscular spasms often continue to a more or less extent, and, in India, cases are reported in which the attendants have been forced to secure the limbs of the dead, so great was the moral effect upon the neighboring patients. The blueness of the face and members remains; the eye is dull; the subcutaneous cellular tissue is dry; the muscles are dark colored and but slightly consistent (exceptional, Valleix). This bluish appearance is also noticed in the greater part of the spongy bones, and even to the roots and crowns of the teeth. The digestive canal is pale and discolored in places, but in general offers a dark color, due to the arrest of the blood. From the œsophagus to the rectum, but particularly at the end of the ileum and in the cœcum and colon, is often found an eruption of hard, opaque bodies, about the size of the head of a pin, which are nothing more than the swollen follicles, such as are often found in other diseases where the serous exhalation is increased. The stomach and intestines contain a variable quantity of a flocculent liquid, sometimes acid, sometimes alkaline in reaction, and of an insipid odor. Most authors deny the presence of any bile, but Dr. J. C. Dalton and Niemeyer say that the bile is present, but recognized with difficulty from its extreme dilution. In color this liquid varies from a greyish white to a chocolate, the darker being more common in the lower parts. Its nature is generally considered to be that of the serum of the blood, although Andral and Bouillaud consider it mucous, and Bouillaud attributes to it some specific qualities. The flocculi floating in it, as well as the creamy, grayish-white membranes with which parts of the entire digestive canal are covered, consist of epithelial scales in different stages of perfection. Valleix, Bouillaud and several others have occasionally noticed in the gall-bladder the presence of a liquid resembling that found in the intestines, while J. Brown has usually found it turgid with black blood. Some cases are reported in which it has been distended by bile. Virchow has signalized an enormous accumulation of fat in the villi of the intestines, a fact attributed to the ordinary occurrence of the attacks during the process of digestion, when the vessels are loaded with chyle. In other respects the biliary and lymphatic vessels are unaltered. The kidneys, particularly in their cortical substance, are engorged with black, diffluent blood, and a certain flaccidity of their tissue is noticed by Dr. Dalton, as well as a peculiar smell, resembling that of molasses, which is exhaled from their cut surface and replaces the ordinary renal odor. The liver is congested with black blood; the spleen is generally small and hard, while the other parenchymatous tissues are congested and of a peculiar bluish color; the bladder, ordinarily empty and retracted, but occasionally containing a certain amount of altered mucus, exhibits on its internal surface membranous patches similar to those found in the digestive canal; the lungs are usually collapsed, flabby and hardly obstructed—rarely, however, there is extensive congestion, and apoplectic centres even have been found in them. Small patches of the whitish membrane spoken of in connection with the digestive canal are sometimes found in the bronchial tubes. The heart is small, flabby and easily torn; the right ventricle filled with black, sticky blood, the left usually empty. Ecchymoses are sometimes found on the pericardium and on the endocardium of the left ventricle. The whole venous system is engorged with the same black, sticky blood, which coagulates very slowly and parts with but little if any of its serum. Upon exposure to the air, according to Rayer's investigations, it oxidizes more slowly than in its normal condition, owing to the absence of the saline substances which favor oxygenation. Schmidt found the oxygen diminished more than one half. The fibrin, albumen and salts have been found deficient by most chemists, although Robertson, of Edinburgh, states that the fibrin is usually in large amount, and Andral that albumen is present in normal quantity. Becquerel concludes that the proportion of the globules is increased; the serum, less abundant and denser, contains an abnormally large proportion of extractive matters, salts, and particularly fatty matters. Microscopic examination has shown the globules normal in appearance, but Donné has remarked a certain viscosity, which prevents them from slipping easily in the liquid in which they swim. Dr. Parkes has observed that, in some cases, the addition of a few drops of the liquid taken from the intestine would restore the arterial color to the blood. The serous membranes are all more or less dry and sticky, the peritoneum particularly so; the cerebral and cerebro-spinal vessels are more or less engorged; the cerebral substance is likely to be congested, and even the nerves and their ganglions may be in the same condition, although the nerve tissue is never altered. The semilunar ganglion, thought by some authors to be the original seat of the disease, has been found normal by the majority of pathologists.

In subjects who have died in the period of reaction, there is less venous but more active and inflammatory congestion; the brain is dotted with puncta cruenta; the lungs are sometimes inflamed or hepatized; the blood is redder and contains more serum; the peculiar liquid has disappeared from the digestive canal; the serous membranes are moist; the agminated follicles are occasionally a little swollen, but without showing any of the characteristic appearances of typhoid fever; the bladder contains a variable quantity of urine.

Thus far the alterations given us by pathologists are (1st), the general injection of the venous system, giving the peculiar color to nearly all the organs; (2d), the characteristic liquid found in the digestive canal; (3), the absence or altered condition of the mucus in the different cavities which are lined by a mucous membrane; (4th), the development of the glands of the intestine—evidently most insufficient grounds for the basis of anything more than a purely speculative hypothesis.

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## CASE OF POISONING BY CYANIDE OF POTASSIUM.

[Communicated for the Boston Medical and Surgical Journal.]

Dr. Taylor says of the cyanide of potassium, that it is one of the most formidable poisons known to chemists. It has destroyed life in a quarter of an hour; a dose of five grains has proved fatal in three instances. The symptoms which the cyanide produces are similar to those occasioned by prussic acid. He reports five cases of poisoning, of which one recovered. The dose, according to the Dispensatory, is the eighth of a grain.

The preparation which the patient took in the present instance was that used in electro-plating, and consisted of the following ingredients:—water one gallon, cyanide of potassium one pound, and chloride of silver one ounce. Of this about three teaspoonfuls were taken, which would contain twenty-three grains of the cyanide. The history of the case is as follows:—

April 19th.—The patient, J. M., is a strong and healthy man, employed as a porter in a machine shop. While at work this morning, and feeling very thirsty, dipped a tin cup into a jar of liquid, which he supposed to be water, and brought it hastily to his lips. He had no sooner tasted of the liquid than he discovered that it was not water, but not in time to prevent himself from swallowing about three drachms, as near as he can judge. He was told that he had swallowed poison, and immediately endeavored to produce vomiting by putting his finger down his throat, but without avail. In the course of two minutes he became senseless. An emetic of sulphate of zinc was administered, and he was brought to the Massachusetts General Hospital, where he arrived about thirty-five minutes after first taking the poison. The emetic operated partially just before entrance. It should be mentioned that he had taken dinner two hours before swallowing the poison.

On examining the patient he was found to be perfectly insensible. Respiration slow and rather labored. Pupils dilated and fixed. Eyes open and protruding. Conjunctivæ slightly injected. Face and neck congested and livid, the veins being very prominent. Skin on head hot. Temperature of extremities normal. Pulse full, bounding, regular and rapid. Lies immovable and relaxed on the table.

The introduction of the stomach pump was embarrassed considerably by a spasmodic closure of the jaws, which were with some difficulty pried open. A solution of salt and water was first thrown in, as the patient was supposed to have taken nitrate of silver. This was allowed to remain there for a short time and withdrawn. The stomach was then thoroughly washed out by repeated injections of warm water. In the meantime the true nature of the poison was discovered, and accordingly about eight ounces of a solution of ammonia and water (seven drops to one ounce) was thrown into the stomach and allowed to remain, while the vapor of ammonia was applied freely to the nostrils. During this operation the patient had a paroxysm characterized by convulsive movements of the arms and legs, followed by rigidity. Some tendency to opisthotonos. Pupils greatly contracted and fixed. Pulse very feeble. Whole paroxysm lasted about one minute. Cold applications were now made to the head, and patient was left quiet, with orders to apply ammonia occasionally to nostrils.

From this time he began slowly to revive. After a time the face assumed a natural appearance, pupils resumed their normal size, and pulse began to fall. By evening he had almost completely recovered from the effects of the poison. Complained still of a feeling of lightness about head and some headache. Throat felt a little sore. No pain in bowels or epigastrium. The next morning ate a light breakfast, after having slept soundly during night. Felt as well as ever he did, and, being desirous to go home, was discharged. W.

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## NITROUS OXIDE AS AN ANÆSTHETIC AND THERAPEUTIC.

**[Communicated for the Boston Medical and Surgical Journal.]**

IN the number of the JOURNAL of September 7th, 1865, we stated some facts in reference to the safety of this agent for anæsthesia. Farther investigations have fully corroborated the statements there made. As a safe and reliable anæsthetic when properly prepared and administered, we believe nitrous oxide to compare favorably with any yet devised; while as a therapeutic, its value, in a certain class of diseases, cannot be questioned by those who have seen it fully and fairly tested.

The fact that a chemical compound has been long known and familiarly dealt with in popular lectures by the learned and the ignorant, is no sure proof that its nature and proper applications are understood. Phosphorus was, for more than 150 years, a familiar element, and yet how little was known of its wonderful nature and applications until the production of innoxious, amorphous phosphorus by Schrötter in 1848.

About sixty-five years ago, Davy performed a few rude and unsatisfactory experiments with nitrous oxide. These have served as the basis of description by a legion of compilers of Chemistries since; and from these the notions of this gas have been chiefly derived; while scores of lecturing mountebanks, supplied from such sources, have essayed to enlighten the public upon the nature and relations of this interesting compound to the human system.

A few years since, Dr. Wells, of Hartford, gave a practical demonstration of its qualities as an anæsthetic in dental surgery. Very soon its adoption by the profession became general. Ignorance vied with avarice in constructing apparatuses for making and inhaling the gas.

Few appear to understand the necessity of purity of material and caution in heating this and washing the product thoroughly. Few appear to be acquainted with the chemical fact that heat effects allotropic changes in the nitrous oxide similar in kind, though less in degree, to those effected in phosphorus, sulphur, and certain organic compounds. This gas, generated at a heat fluctuating between 500° and 600°, even when thoroughly washed, is quite different in its physiological effects from the gas generated at a nearly uniform heat between 400° and 410°. The tendency of the former, especially when taken into the lungs soon after making, is to affect more the brain and produce disturbed anæsthesia. Besides, it possesses more taste, and its action upon sensitive lungs is more perceptible. Hence the importance of maintaining a low and uniform heat while preparing this gas. Again, the washing and cooling should be far more than is ordinarily given it. A single bubbling in mass, or two or three such, whether in a large or small body of water, does not wash it. The gas, for thorough washing, should be *strained* through at least four or five carefully perforated glass vessels holding from one half to two gallons each, so that every portion may come in contact with the washing fluid. With such precautions, a very different gas for medicinal and anæsthetic uses is made. Furthermore, this, for preservation, should be confined in properly constructed metallic vessels over water, where it will remain with little change from two weeks to two months, and may be inhaled at will.

Nitrous oxide so prepared, and inhaled in its purity by means of a proper valve inhaler, we know by personal experience to be a harmless inhalant, as we have taken it thus, to entire insensibility, nearly 150 times within the past year with only beneficial results, while we have tested it upon numerous persons with like results.

No patient entrusts his person to one whose word or skill he in the least questions. So has it been in the treatment by nitrous oxide. All dental surgeons use only pure material, the best apparatus, have a ripe experience, and of course give their patients a chemically pure article of nitrous oxide. Injury or failure is of course supposed to be due to the principle, not to the application. To illustrate:—When the gas furor prevailed in the fall of 1863, and cheap nitrate of ammonia, tin gas holders, molasses casks and small inhaling bags were in demand, a dentist of respectable attainments —suddenly metamorphosed into a chemist—commenced making and administering the "laughing gas." With full confidence in his professional skill, a lady of delicate physique applied to have some teeth extracted under the influence of the gas. While she waited, the rude materials were arranged, a furious heat applied, and soon a small bag of it was prepared. She inhaled this corrupt compound until anæsthesia was produced, and had the extraction performed. A sore mouth, a cough, and serious injury to her lungs was the result. What intelligent chemist would question injury from such barbarous treatment? and yet the patient did not suspect the operator, but nitrous oxide. Such was by no means an isolated case, nor are they yet wholly wanting.

We have long protested against such tampering with health, when safety is the easier and more economical course in the use of this valuable agent. Made from an impure salt at a random heat, half washed, and given from a small rubber bag contaminated with accumulated mucus discharged from scores of diseased lungs and carious teeth—so made and administered, is it any wonder that the half asphyxiated victim of headache and vertigo dislikes the gas? One pretentious lecturer assured us that he had used in an exhibition small bags inflated with air, where the materials for making the nitrous oxide failed him—the delirium was satisfactory. Another assured us that with a beer bottle for holding the nitrate of ammonia, and a single stone preserve jar for washing the gas, the results with the "laughing gas" "were very satisfactory."

A gentleman recently stated to us a case told him by the perpetrator himself, a dentist, where being called upon to give nitrous oxide and having none, he withdrew to his laboratory, inflated a rubber bag *from his own lungs,* administered it and extracted a tooth without a suspicion of the ignorant patient, who only complained of a subsequent headache!

For inhalation, nitrous oxide should be made from the purest nitrate of ammonia, thoroughly washed by straining through several separate washers, confined over water, and inhaled in its purity through a valved inhaler. So made and inhaled, we question if an instance can be found where serious results have followed its use.

As an oxidizer and purifier of the blood, the claims for nitrous oxide must be allowed. When medicated and then judiciously inhaled, its applications become still more important; since owing to its rapid absorption by the blood, remedies are made to permeate the system much sooner and more effectively than when applied through the medium of the stomach and lacteals.

That nitrous oxide is destined to become an important anæsthetic and healing agent, may be inferred from the success which has already attended it. The fact that some mercenary schemers and quasi M.D.s have seized upon this from mere motives of gain, should not deter intelligent members of the medical profession from giving it a full and honest trial. As an anæsthetic, nitrous oxide is rapidly gaining confidence with the highest order of dental surgeons. Should intelligent physicians fairly test its virtues we believe they would not be long in recommending its adoption, when it would soon pass from medical charlatans to a wider and more skilful arena of practice. A. W. SPRAGUE.

*Boston, April 20th,* 1866.

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## SUMMER MEDICAL INSTRUCTION IN PHILADELPHIA.

*To the Editors of the Boston Medical and Surgical Journal.*

IN my last letter I promised to give you a short account of our summer school in this city.

Many years ago, at the Jefferson Medical College, a course of summer instruction was established and commenced. It was conducted by gentlemen of ability, but, I believe, by those not otherwise connected with the college. It was soon given up, however; but the large increase of the students, and the manifest increase of interest of many of the students, led the faculty to recommend a summer course at this time. Accordingly the present session commenced April 2d, and with so much apparent interest on the part of the students as to warrant the scheme one of perfect success. Indeed, it was an *institution* much needed, and were it generally in so effective and zealous operation as has been, and *still is*, that of the Harvard School, and as is *now* at this (Jefferson) school, young men would be sent out into the world far better qualified to perform the sacred trust imposed upon them. The system established here differs somewhat from that of the school in your city. The instruction is almost entirely given in clinical and didactic *lectures*. The clinical teaching is given at the college, as also at the "Wills Ophthalmic Hospital," and the "Philadelphia Hospital." These hospitals are most extensive, and afford ample field for the most zealous and persevering student. The course is entirely practical in character, embracing important specialties in medicine and surgery, together with extensive clinical illustrations.

The Lectureships are constituted as follows:—*Clinical Surgery*, Profs. Gross and Pancoast; *Clinical Obstetrics*, Prof. Wallace; *Pathology*, Prof. Dickson; *Hygiene and Meteorology*, Prof. Rand; *Materia Medica and Therapeutics*, Prof. Biddle; *Clinical Medicine*, Dr. Da Costa; *Visceral and Surgical Anatomy*, Dr. W. H. Pancoast; *Minor and Operative Surgery*, Dr. S. W. Gross; *Physiology*, Dr. J. Aitken Meigs; *Ophthalmic and Aural Surgery*, Dr. R. J. Levis; *Venereal Diseases*, Dr. F. F. Maury.

The lecturers are, as you will observe, men skilled in their profession, and eminently fitted for the high positions they are called upon to fill. Some of them are "old in the harness," and well known to your many readers. Professors Gross, Pancoast, Wallace, Dickson, Rand and Biddle are lecturers of high stamp, and fill their respective chairs during the winter session. Dr. Da Costa, though lecturing at the college for the first time, is well known as a practitioner and an author. His authority is acknowledged upon diseases of the chest, especially. Dr. W. H. Pancoast, son of Professor P., is the demonstrator of anatomy at this college, and promises to be equal to his sire. Dr. S. W. Gross, son of Prof. Gross, is *well* known, at least in military circles, having been brigade surgeon and Medical Director of the Department of the South during the war. Drs. Meigs and Levis are men of excellent standing in their profession. Dr. Maury fills his chair with much credit. He is a *young* man, but rapidly rising, and promises to reach a high position in our profession. Thus the school is organized, and in its success exceeds the expectation of its founders. Such a school deserves to succeed. Sad for our profession, young men are sent out into the world to follow our calling poorly fitted for such duty. Let other schools throughout the country follow the old example of Harvard, and the new one of Jefferson, and men will reflect honor on their alma mater. The clinics afford some exceedingly interesting cases, and the patients treated present much matter for study and remembrance.

*Philadelphia, Pa., May 3d*, 1866. E. R. Hutchins.

## PROCESS OF DISINFECTION.

A MEMORANDUM on disinfection has been issued by the Privy Council (Great Britain). In view of the approaching epidemics, we give its main points, after the *Chemical News and Druggists' Circular:*

"1. For artificial disinfection, the agents most useful are—chloride of lime, quicklime, and Condy's manganic compounds. Metallic salts—perchloride of iron, sulphate of iron, and chloride of zinc are applicable. In certain cases chlorine gas or sulphurous acid gas may be used; and in other cases powdered charcoal or fresh earth.

"2. If perchloride of iron or chloride of zinc be used, the common concentrated solution may be diluted with eight or ten times its bulk of water. Sulphate of iron or chloride of iron may be used in the proportion of a pound to a gallon of water, taking care that the water completely dissolves the sulphate of iron, or has the chloride of lime thoroughly mixed with it. Condy's stronger fluid (red) may be diluted with fifty times its bulk of water; his weaker fluid (green) with thirty times its bulk of water. When the matters requiring to be disinfected have an offensive smell, the disinfectant should be used till this smell has entirely ceased.

"3. In the ordinary emptying of privies or cesspools, use may be made of perchloride of iron or chloride of zinc, or of sulphate of iron. But where disease is present, it is best to use chloride of lime or Condy's fluid. Where it is desirable to disinfect, before throwing away the evacuations from the bowels of persons suffering from certain diseases, the disinfectant should be put into the night-stool or bed-pan when about to be used by the patient.

"4. Heaps of manure or of other filth, if it be impossible or inexpedient to remove them, should be covered to the depth of two or three inches with a layer of freshly burnt vegetable charcoal in powder. Freshly burnt lime may be used in the same way, but is less effective than charcoal. If neither charcoal nor lime be at hand, the filth should be covered with a layer of some inches thick of clean dry earth.

"5. Earth near dwellings, if it has become offensive or foul by the soakage of decaying animal or vegetable matter, should be treated on the same plan.

"6. Drains and ditches are best treated with chloride of lime, or Condy's fluid, or with perchloride of iron. A pound of good chloride of lime will generally well suffice to disinfect 1000 gallons of running sewerage; but of course, the quantity of disinfectant required will depend upon the amount of filth in the fluid to be disinfected.

"7. Linen and washing apparel requiring to be disinfected should without delay be set to soak in water containing per gallon about an ounce either of chloride of lime or Condy's red fluid. The latter, as not being corrosive, is preferable. Or the articles in question may be plunged at once into boiling water, and afterward, when at wash, be actually boiled in the washing water.

"8. Woolens, bedding, or clothing which cannot be washed, may be disinfected by exposure for two or more hours in chambers constructed for the purpose to a temperature of 210 to 250 degrees Fahrenheit.

"9. For the disinfection of interiors of houses, the ceilings and walls should be washed with quicklime water. The wood-work should be well cleansed with soap and water, and subsequently washed with a solution of chloride of lime, about two ounces to the gallon.

"10. A room, no longer occupied, may be disinfected by sulphurous acid gas or chlorine gas—the first by burning in the room an ounce or two of flowers of sulphur in a pipkin; the second by setting in the room a dish containing a quarter of a pound of finely-powdered black oxide of manganese, over which is poured half a pint of muriatic acid, previously mixed with a quarter of a pint of water. In either case, the doors, chimney, and windows of the room must be kept carefully closed during the process, which lasts for several hours."—*Journal of Materia Medica.*

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## Bibliographical Notices.

*Medical Electricity, embracing Electro-Physiology and Electricity as a Therapeutic.* By ALFRED C. GARRATT, M.D. Third Edition. Philadelphia: J. B. Lippincott & Co. 1866.

THIS large volume is the third edition of a work published in 1860, under the title of "Medical Uses of Electricity." Its author informs us in the Preface (page 14) that:—

"Judging from the rapid and extensive sale of the first and second editions, and from the many kindly communications the author has received from learned men in Europe, but more particularly from medical gentlemen in all parts of our own country who are untainted with quackery, some of them being connected with the largest and best medical schools, as well as those held high in public esteem for sagacity and skill, and are in extensive practice—it is conceded to have accomplished a very convincing work. For these reasons, also, some hundred pages of that portion of the book are thrown out to be replaced by twice as many pages prepared from actual experience in practice."

One of the faults of the book is this very size. The author gives us 1085 pages, and on the 1085th page is still burdened by untold matter. A great part of the work is a compilation from others, as such a work must necessarily be; but it is diffuse without being clear.

On page 9 the author says:—"A systematic work on the medical and surgical uses of electricity, containing clear and practical directions as to *where, when* and '*how*' to employ electricity as a remedy, has long been greatly needed." But among the first requirements for such an undertaking is a judicious selection of facts, omitting such as are of little value or useless, while presenting the others with due regard to their importance, and putting them all in a concise and clear form. This seems to have been very much neglected in the work before us. The subject is spun out without being made more intelligible, till in some parts it becomes actually tiresome, and in many instances is put in language which it requires an effort to understand. For instance, we meet frequently with phrases like these:*—(p. 7) "*Vitality* is more than electricity." "Life is electro-chemistry *vitalized.*" On page 43, after a description of the ozonoscope, follow some remarks on ague, of which this is one. "The whole phenomena of effect on man are *a reduction of nerve force,* a deranged and damaged vitality." Does this mean anything but that the man is debilitated? To the question (p. 110) what are the first radical effects of galvanic currents upon the living organism, the author says that if it were put to him he would say :—"In part it is known, but in part we do not know. The everywhere present *vitality,* unknown and yet seen, in all parts of living bodies, is the *mainspring* of life; but as no one knows what that is, *who will attempt to explain it?*" On page 111 we find that the human body "yields a kind of constant voltaic electricity modified by vitality." Again, on page 117—certain investigations show "that in whatever process or function of the human body the blood is most essential, these, nothing less than true voltaic or animal electric actions and *life force,* must also have an influence." On page 113 we find, "A skull that is manifestly incompetent in size and proportion to contain the *usual* entire cerebral electro-nerve battery indicates that the individual is deficient in mental power, *unless the contained brain is fine and high toned.*" This we suppose means that a man with an unusually small brain is not necessarily stupid, though he probably is. We are told in the chapter on Atmospheric Electricity (p. 41) that "meteoric epidemics are caused by undiscovered insalubrious qualities of the general atmosphere." On page 432, we find directions for electrifying the base of the brain, the medulla oblongata and great nervous centres generally. An *up-running* current stimulates them, a *down-running* current has "a calming and downtoning effect." But on page 244 we have been told what is well known, that electrization of the spinal cord produces tetanic convulsions. It is more than probable that in placing one electrode at the neck, the other at the coccyx, as is proposed for electrifying the great nervous centres generally, the electrical current does not reach them at all.

Besides the many obscure passages, such as the above, there are some which we do not understand in the least; such, for instance, as the author's remarks on the "Hallerian irritability" of muscle (p. 128); where, moreover, we are startled at the announcement that animal electricity is not governed by the laws of electricity as found in inanimate nature, but by the still more subtle influence of vitality.

There is a great deal of this indefinite kind of writing in the book, so much so that were it not for the copious selections from other authors we might occasionally ask whether it were intended to be a scientific work, or whether it were not written for the public rather than for the profession. Again, the definitions, diagnoses and descriptions of diseases which take up so much room in the chapter on Electro-Therapeutics, can hardly be of any value to a practitioner, nor even to a student, who must be supposed to have acquired a certain amount of medical knowledge before he undertakes the perusal of a special work on medical electricity.

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* The Italics are in the original.

Notwithstanding, however, the very indifferent manner in which the scientific part of the work is presented, the author must be a good manipulator with the electrodes, an excellent practical electrician. His work contains a great many valuable facts, and for these facts alone we are glad to have it. Practical suggestions, reports of cases from other authors, and from his own practice, some of them very interesting and instructive. On this account we welcome the book; not as a text book for students, not as a scientific treatise, but as a book of reference. We therefore wish the author had given us more extensive foot notes, informing us of the exact places where his numerous extracts might be found in their originals.

If Dr. Garratt's book reaches a fourth edition, we hope he will condense it to 250 or 300 pages; that he will give us the practical results of his own experience and of that of other authors, leaving aside all more abstract matters.

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## THE CONSULTING PHYSICIANS OF BOSTON ON ASIATIC CHOLERA.

The Consulting Physicians of Boston have addressed a communication to the City Government on the important subject of cholera, the main object of which would seem to be to express their dissent from the views recently expressed by the City Physician on the question of its communicability, their regret that his opinion should have been allowed to influence the action of the Board of Health without previous consultation with them, and their remonstrance against any quarantine regulations adopted with the hope of excluding it from our borders, which regulations they are pleased to denominate "not only as useless, but even cruel, oppressive and unjust." This seems to be the principal motive for the communication in question, for the remainder of it is principally made up of suggestions as to the best hygienic methods of preparation for the anticipated invasion of this disease, which are eminently wise and judicious, but containing nothing specially novel in them calling for communication to the City Government.

Our readers will hardly be surprised to learn that we hold very different opinions from those so positively presented in the document before us. The deduction from them, if allowed to influence government action, is so important, and in our view so dangerous, that we feel compelled to utter our remonstrance against them as a guide. While professing not to enter into a discussion on the subject of the contagiousness of cholera, the Consulting Physicians nevertheless present a series of alleged facts and positive statements collected from numerous sources, relating to the past history of this disease, some of which certainly it would be hard to substantiate; such as the assumed great exemption from the disease of the attendants on the sick in proportion to their numbers, the opinion that it cannot be barred out by quarantines or cordons, and the like. At the conclusion of this mass of negative testimony, they declare that they are led to as full an assurance as negative testimony can furnish, that cholera is not contagious.

Now we are not unwise enough to undertake to explain all the mysteries nor solve all the problems offered by these gentlemen as proof of the non-contagiousness of this disease: this would be simply impossible, if for no other reason, because of the difficulty of getting at the real facts. Our business as journalists is to present, as fairly as we can, the history of the epidemic now on its march, and the views of those members of the profession who have personally had the most to do with it. We say the difficulty of getting at the real facts of the case. A single instance will serve as an illustration. The appearance of the cholera on shipboard in mid-ocean, in November, 1848, has been cited, and with great emphasis, as a very conclusive proof that this disease is produced by atmospheric causes quite independently of any principle of contagion. Although the believers of the portability of the germs of this disease have felt that it was a fair explanation of this occurrence to say that the limit of its latent period was not exactly known, and that there was nothing at all improbable in the supposition that in this instance the disease had been brought from Europe but had remained latent until the time it broke out, yet this has never seemed to have any weight with anti-contagionists, and has been regarded as a merely theoretical explanation. Happily, at this late hour, we have learned the exact facts in the case, and they support in the most positive manner the opinions of the contagionists. They were furnished to the Quebec *Morning Chronicle* of February 19th, 1866, by Dr. Marsden, of that city, and, as copied in the *Medical and Surgical Reporter*, they are as follows:—

"'Of the vessel that sailed on the 9th of November, 1848, from Havre for New York, the facts were remarkable and are these: When the vessel referred to (the ship New York) reached the Northern Atlantic coast, near Cape Sable, the weather became cold and boisterous. Among the passengers were a number of German emigrants, who came from a place where cholera prevailed, and had been among it. One of them had a chest of clothing which belonged to a person who had died of cholera. The chest was opened, the clothing taken out and used, and on Tuesday, the 22d November, a child was taken ill at 2, P.M., and died at 8, P.M., and a second child died with similar symptoms. On the following Wednesday and Thursday, four men were reported sick, two of whom died suddenly with symptoms of cholera. A third died from what was considered dysentery. Twelve were landed at the quarantine station at Staten Island, of whom three died, &c.' He also gives another instance of contagiousness:—'A sailor died in some port in Europe, of Asiatic cholera, in 1832. A chest containing his *personal effects*, clothing, &c., was sent home to his family, who lived at a small straggling village on the Atlantic coast in the state of Maine. It reached them about Christmas, 1832, and was opened on arrival. The inmates of the house were all immediately and suddenly seized with a disease resembling Asiatic cholera in all its malignancy, and died! There had been no cholera in the State. Had this occurred in summer, instead of the depth of winter, and in a more thickly peopled locality, there would doubtless have been a repetition of the recent Gaudaloupe tragedy, by which a whole country became infected from the clothing of persons who had died of Asiatic cholera, which had been sent ashore to be washed. In this case, had the infamous conduct of the pilot who sent the things secretly on shore not been discovered, the case would have been handed down as a wonderful non-contagious fact of Asiatic cholera breaking out without infection or importation.' The authenticity of the last quoted case is also attested by the venerable Prof. R. D. Mussey, now residing in this city, who, as his son informs me, was at the time fully conversant with the facts."

The above quotations are from a communication by Dr. Read, the City Physician of Boston, maintaining the correctness of his recently announced belief in the contagiousness of cholera.

In the discussion of this question one very important fact has been too often overlooked by those who insist on its non-contagiousness, namely, that most contagious diseases are *both contagious and epidemic*. Take, for instance, the case of such diseases as smallpox, measles and scarlatina. There is hardly a day in which cases of all these diseases may not be found in any one of our large cities. And yet at certain periods they spread through the community with a power which excites very general alarm; while at others, the fire, as it were, only smoulders in certain localities, the scattered embers barely glowing, and yet ready under favorable circumstances to kindle a wide spreading conflagration. No rational physician doubts that these diseases are as essentially *contagious* in the seasons of their quiescence as when they are distributed broadcast throughout the community, counting their victims by hundreds.

As it is very generally believed that the weight of professional authority has heretofore been mainly on the side of the anti-contagionists, perhaps with some show of reason, it is worth while to turn to the published opinions of men whom all the world acknowledges as leaders in the profession. Such a one is Dr. Watson, of London, the recognized head of the medical profession in England. Here is what he said, so long ago as 1844, as we find it published in his Lectures on the Practice of Physic, a standard text book down to the present time.

"Many persons believe that the complaint spread by contagion; more, however, that it was not contagious at all, but arose from some deleterious cause with which the general atmosphere of the place was pregnant. Now I cannot reconcile the phenomena of the appearance and extension of the malady with either of these hypotheses, *exclusively*. It must, I think, be granted, that the complaint, in every instance, was excited by the application of some noxious material to the body, some positive poison. It is certain, also, whichever hypothesis may be chosen, that many more individuals were exposed to the agency of this poison than were injuriously affected by it. This exemption from the disease no more invalidates the doctrine of contagion, than it invalidates the doctrine of some diffused atmospheric influence; nay, it is more explicable upon the former than upon the latter supposition; for while many may avoid a specific contagion, all are immersed in, and all breathe, the common atmosphere. But the exemption shows *this:* that the exciting cause, to be effective, required a fit recipient; that the susceptibility of being hurt by the poison in its ordinary dose and intensity varied much in different persons; and in the majority was very faint, or wanting. It is clear that the poison travelled. *It is equally clear to my mind, that it was portable; and therefore communicable from person to persons. I even believe that it was capable of being conveyed, and was actually conveyed, from one spot to another, by persons who were themselves proof against its effects. The innumerable instances of coincidence, in point of time, between the first outbreak of the disorder in a particular place, and the arrival at that place of some person or persons from an infected locality, prove that the poison could be thus carried.* Of this direct importation of the disorder into new and distant places, by infected individuals, and of its subsequent extension from those individuals to others who had intercourse with them, you may see a vast number of examples, collected by Dr. James Simpson, in the 49th volume of the *Edinburgh Medical and Surgical Journal.* The evidence there adduced of the portability of the poison is abundant, and to my mind, irresistible."

We think we have said enough at the present time in support of our opinion that there is sufficient evidence of the portability and communicability of cholera to make it the part of wisdom for all governments to use the most stringent measures of quarantine in the hope of keeping it from getting a foothold on their shores. We are most favorably situated in America in this respect. Already has the disease arrived on our coast three times within the past year, and by such regulations it has been held at a distance until it has died out. To say that such regulations, with a knowledge of these circumstances, are useless, unwise and cruel, is an abuse of language which we do not think it necessary to make any comment upon. We think our community is to be congratulated that the advice of the City Physician has been adopted by the Board of Health as a guide to their action.

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*Portability of Cholera.*—The newspapers of to-day contain a very significant fact in its bearing on the question of the portability of cholera. The steamer Helvetia, it seems, bound from Liverpool to New York, was compelled to put back to the former port, where she arrived on the 4th inst., by the appearance of cholera on board before she arrived at Queenstown. The disease first appeared among the German emigrants on board, and the National Line has in consequence decided to stop German emigration through their vessels. The British Government has ordered a full examination of German emigrants before their admission to England, the cholera having appeared among this class at Liverpool.

Dr. Snow, of Providence, maintains that there is a cholera-generating belt traversing the ocean at this time towards the west, and that the ships which recently arrived at Halifax and New York with this disease on board were infected by passing through this belt. These ships contained German emigrants from the Rhine, where the disease by recent accounts was raging fearfully. To say nothing of the complete immunity of steamers and other vessels crossing and re-crossing the ocean at the same time, which must have passed through such a belt if it had existed, it would seem that we need not apprehend its approach to our shores; for if the theory of its existence is correct, the outbreak on the Helvetia would seem to show that it must have taken a turn backwards towards its starting point.

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*Massachusetts Medical Society.*—The announcement in our advertising columns of the programme for the approaching meeting of our State Society shows that it promises to be one of unusual interest. We call attention to it thus early, in the hope that there may be a large gathering of the Fellows to mark what promises to be a new era in its history.

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*Messrs. Editors,*—A few days since I was called to see Mr. H. H. B., aged 25 years, of more than average muscular development and vigor. He gave me the following account:—While crossing Boston Common on his way to the Providence depot he tarried a moment to witness a game of base ball. Although four rods from the players he was hit in the face with a ball with great force. I found there was bleeding from the gums, dribbling of saliva and crepitus between the lateral incisor and canine tooth of left side of lower jaw. The displacement was inconsiderable, and the irregularity in the line of the teeth slight. Yet the mobility was quite distinct, proving unequivocally the fracture. The parts were secured in apposition by connecting the sound teeth on each side of the fracture with platinum wire, and by the application of a piece of pasteboard previously softened in hot water, and accurately fitted to the jaw, and retained in position by the four-tailed bandage. The pasteboard I intended as a temporary appliance, meaning to substitute gutta percha; but the former answered so well that I did not remove it.

The patient in his extremity called upon a physician near, who readily recognized the nature of the accident, but who generously waived his right to the patient, and advised him to apply to some physician this side of the Charles, when he learned he intended to stop in this city.

So severe an accident, and produced in the manner it was, would lead us to infer that these balls must be composed of different material from yarn or thread, and that serious injury may not unfrequently result from their too common or careless use. This is especially true if the statement I have heard is correct, that the nucleus or central part of these balls is composed of lead. A. B. BANCROFT.

*Charlestown, May 5th,* 1866.

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*Narceine.*—M. Liné, formerly Interne des Hôpitaux, after a series of experiments with narceine in the wards of M. Delpech, gives the following *résumé* of his observations:—

1st. Of all the alkaloids contained in opium narceine possesses hypnotic power to the greatest extent. In the great majority of cases neither morphine or codeine produce so long or so profound a sleep.

2d. Narceine causes only in a very feeble degree the physiological phenomena consequent upon the sleep produced by morphine and the salts of that base. Besides, the perspiration is much less abundant than after the use of opiates. Vomiting is rare; nausea and loss of appetite more common. Narceine in its action upon the intestine differs sensibly from morphine; instead of causing obstinate constipation, its effect, in small doses, is that of a gentle aperient. In larger doses it causes a diarrhœa.

3d. Narceine relieves pain, like all opiates.

Among the different effects produced upon the secreting organs, that upon the kidneys is nearly constant. Anuria, to a greater or less extent, is noticed particularly after rather large doses. Perhaps this peculiar action of narceine might be turned to account in the treatment of incontinence of urine in children.—*Gazette des Hôpitaux*, April 3d, 1866.

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In a communication to the Imperial Society of Physicians on the use of cold applications, Dr. Winternitz, of Vienna, claims that all the good effects, without the subsequent injurious reaction, can be obtained by employing them centrally instead of locally and peripherally. That felons and hæmorrhages of the fingers, for instance, can be better controlled by the application of cold to the upper arm than when used locally.

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Dr. James P. White, in an interesting letter to the *Buffalo Medical and Surgical Journal*, mentions the following singular facts:

"In the vault or 'cavern' attached to St. Michael's church (in Bordeaux) you are shown the preserved bodies of 70 to 100 individuals of all ages and both sexes. Their history, as furnished by the guide books and *valets de place*, is as follows: There is a belfry attached to the church which was built between 1472 and 1480, the steeple of which formerly rose to the height of 300 feet. The ground around this belfry was used as a church-yard or cemetery. In the early part of the French revolution the church-yard was closed, and the bodies dug up, and the belfry and steeple nearly razed to the ground. The bodies above referred to, many of which had been buried three or four hundred years, were found to be *perfectly preserved*. They look like mummies or dried fish, or half tanned leather. The age, sex, and even the features to a considerable extent can be made out. Here stands a General, who is known to have fallen in a duel, with the wound in the chest which caused his death, still gaping and patulous. There an old woman, whose whole breast, and the surrounding tissues, were destroyed, probably by cancer, the remainder of the body being entire. Upon the other side are those who seemed to have died in full health, plump and round; there are others emaciated to skeletons, as by consumption. Among the number are two or three, who, from the positions which they have assumed, the twisting of the neck, tearing of the hands and the contortions of the countenance manifest, leave little doubt on the mind of the beholder that the statement of the guide is correct, when he assures you that they were buried alive, as these positions could only have resulted from their efforts to release themselves from a confinement most horrible to contemplate.

"It may also be added that the drapery, the linen, the lace even with which the linen was ornamented; the hair, the beard, and its color are in many instances perfectly preserved. To my mind these bodies, thus completely *preserved* (not converted into adipocere), the liquid parts only having escaped by evaporation, present a curious subject of inquiry to the philosophic mind, as to the cause. What were the antiseptic qualities peculiar to this soil which enabled it thus completely to arrest the process of decomposition? So far as I am aware the case is without a parallel. From the guide and the gentleman to whom I had letters I could not learn that the subject had ever been brought to the attention of the scientific investigator, and no suggestions as to the cause of this wonderful phenomenon had been made. Upon my return to Paris I propose to pursue the subject, when I shall, perhaps, find that it has already received such attention as in my opinion it demands, and if so your readers shall learn the benefit of any intelligence which I may be able to obtain upon this curious and interesting question. Meanwhile, were I to hazard a guess, it would be that the soil in which those bodies were interred contained sulphate of iron, which by permeating the animal tissues completely arrested the ordinary process of decomposition, and must preserve them for an indefinite length of time. I am led to this suggestion simply from the color of the earth from which they were taken. But speculation is useless, and I dismiss the subject for the present."

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*General Résumé of the Sick and Wounded of the Confederate States Army under Treatment during the Years* 1861 *and* 1862.—From all the reports filed in the Surgeon-General's office for the years 1861 and 1862, exclusive of the few scattering ones which reached us from the Trans-Mississippi department, we are enabled to sum up the sickness and mortality occurring in the southern armies during the late war as follows:

*Continued Fevers.*—Field reports, 36,746 cases and 5,205 deaths. Hospital reports, 40,565 cases and 7,020 deaths.

*Paroxysmal Fevers.*—Field reports, 115,415 cases and 848 deaths. Hospital reports, 49,311 cases and 485 deaths.

*Eruptive Fevers.*—Field, 44,438 cases and 1,036 deaths. Hospitals, 32,755 cases and 1,238 deaths.

*Diarrhœa and Dysentery.*—Field, 226,828 cases and 1,696 deaths. Hospitals, 86,506 cases and 1,658 deaths.

*Pulmonary Affections.*—Field, 42,204 cases, 3,534 deaths, and 4,538 discharges from service. Hospitals, 36,988 cases, 4,538 deaths, and 1,135 discharges.

*Rheumatism.*—Field, 29,334 cases 1,142 discharges. Hospitals, 30,438 cases and 700 discharges.

*Gun-Shot Wounds.*—Field, 29,569 cases, 1,623 deaths, and 493 discharges. Hospitals, 48,724 cases, 2,618 deaths, and 472 discharges. Killed in battle, 8,087.

*All other Diseases.*—Field, 324,321 cases and 2,278 deaths. Hospitals, 123,402 cases and 1,802 deaths.

Whole number of cases exhibited in the field reports during 1861 and 1862 was 848,555; of which 16,220 died and 10,455 were discharged from service. There were admitted in hospitals for the same period 447,689 cases; of which 19,359 died and 6,485 were discharged. Total deaths in two years, 35,579.

Compound Fracture of the Thigh treated without amputation.

| | Recoveries. | Deaths. | Days. | Inches. |
|---|---|---|---|---|
| | 116 | 105 | | |
| Average period of recovery | — | — | 104 | |
| Greatest period of recovery | — | — | 255 | |
| Least period of recovery | — | — | 41 | |
| Average period of death | — | — | 52 | |
| Greatest period of death | — | — | 185 | |
| Least period of death | — | — | 1 | |
| Average amount of shortening | — | — | — | 1.9 |
| Greatest amount of shortening | — | — | — | 5.0 |
| Least amount of shortening | — | — | — | 0.5 |

—*Richmond Medical Journal*, from *Confederate States Medical Journal.*

*Rectified Oil of Amber as a Remedy for Hæmorrhoids.*—The editor of the *American Journal of Pharmacy*, Mr. William Procter, Jr., contributes the following interesting communication to the journal of which he is editor:

"Of the large number of persons who suffer from this annoying complaint, very many never consult a physician, and many others after renewed treatment give up the idea of becoming cured, viewing the affliction as some do old ulcers, as a burden to be borne while life continues. Various external applications are constantly prescribed, as an ointment of acetate of lead, tannin or nutgall, and opium, which is often successful in affording relief. Numerous secret nostrums have, from time to time, attracted attention, indicating the prevalence of the disease. Several years ago my curiosity was excited by the repeated calls for rectified oil of amber by a person who was not in any way connected with medicine, and he was asked the use to which it was applied. He said it was for piles, and that he rarely knew it to fail, the numerous calls that had been made being for friends and acquaintances who were sufferers from the complaint. After that, on several occasions where opportunity offered, it was suggested and tried with success, in many cases of piles where the tumors were external and annoying. The manner of its curative action I am not aware of. The oil is applied as a lotion to the tumors, and around the anus where the swellings exist. It occasions a smarting sensation at first, but after several applications the sensitiveness disappears, and the tumors are dissipated. So far as is known to the writer the influence is entirely local, and does not extend beyond the parts to which it is applied. I am not aware that it has been applied beyond the sphincter ani to the internal tumors, but know of a case wherein both internal and external piles existed, the latter disappearing, and the others continuing to give annoyance. The object of this note is to ask the attention of medical men to the subject, that the actual value of the oil of amber as a remedy for piles may be satisfactorily tested. It may be that in some cases admixture with lard or cerate would be preferable, and in the form of an emulsion, or associated with glycerin or olive oil, it might be applied in the rectum by injection or by a bougie. These are mere suggestions to the physician.

"It is to be regretted that so little genuine oil of amber is to be obtained, as has been conclusively shown by Mr. Ebert, of Chicago (see page 146 of this volume), who finds that it costs as much per ounce to make the oil as it sells for in commerce per pound. Failures may be attributed to the spurious oil made from turpentine and coal oil, shaken with oil of tar and some oil of amber."

THE publisher of the American edition of *Braithwaite's Retrospect of Practical Medicine and Surgery* proposes to add an appendix, containing a summary of the important medical features of American journalism, and thus to render the work more acceptable to its readers generally. It is also intended to furnish in each number a complete list of the medical works published in this country or abroad during the previous six months, with the price affixed, and with a *very brief* indication of their aim and character. Publishers are requested to facilitate this work by sending to the editor the titles of works in press, with the *retail* price annexed.

The medical profession in this country has been heretofore so completely overlooked by the European Editor, that the American edition cannot fail to be greatly improved by the proposed appendix; and we hope his enterprise will meet with the recognition from the profession which it justly deserves.

## VITAL STATISTICS OF BOSTON.

### FOR THE WEEK ENDING SATURDAY, MAY 12th, 1866.

### DEATHS.

| | *Males.* | *Females.* | *Total* |
|---|---|---|---|
| Deaths during the week | 38 | 46 | 84 |
| Ave. mortality of corresponding weeks for ten years, 1856—1866 | 35.7 | 37.3 | 73.0 |
| Average corrected to increased population | 00 | 00 | 79.63 |
| Death of persons above 90 | 1 | 1 | 2 |

**American Medical Association.**—The continuation of our report of the recent meeting of the American Medical Association has miscarried in the mail, and we are therefore compelled to defer its publication to another occasion.

**Books Received.**—Asiatic Cholera; its Origin and Spread in Asia, Africa and Europe, Introduction into America through Canada; Remote and Proximate Causes, Symptoms and Pathology, and the various Modes of Treatment analyzed. By R. Nelson, M.D., Health Commissioner during the first two invasions, 1832, 1834; President of the Medical Board for the District of Montreal. New York: William A. Townsend.

**Died,**—At Charlestown, May 11th, Dr. Abraham R. Thompson, aged 85 years.—At Harlem, N. Y., May 7th, Dr. James M. Edney, formerly of North Carolina, aged 52 years.

**Deaths in Boston** for the week ending Saturday noon, May 12th, 84. Males, 38—Females, 46. Abscess, 1—accident, 1—apoplexy, 1—disease of the bowels, 1—disease of the brain, 5—inflammation of the brain, 1—bronchitis, 6—cancer, 2—cholera morbus, 1—consumption, 13—croup, 2—cystitis, 1—debility, 1—diphtheria, 2—dropsy, 1—dropsy of the brain, 1—drowned, 2—epilepsy, 1—scarlet fever, 1—typhoid fever, 3—gastritis, 1—disease of the heart, 1—hernia, 1—infantile disease, 2—inflammation, 1—congestion of the lungs, 3—inflammation of the lungs, 7—marasmus, 3—old age, 5—peritonitis, 2—puerperal disease, 2—teething, 1—unknown, 6—uræmia, 1.

Under 5 years of age, 21—between 5 and 20 years, 7—between 20 and 40 years, 18—between 40 and 60 years, 21—above 60 years, 17. Born in the United States, 51—Ireland, 26—other places, 7.